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ABSTRACT

This participant's handbook is designed to be used in conjunction with a workshop for planning bilingual student assessment. The following materials are included: (1) simulation materials, including descriptions of simulated programs, tests, test manuals, and printouts; (2) checklists, diagrams, and charts illustrating important points of the discussion in the text; and (3) checklists, diagrams, and charts to be used in completing the workshop exercises. The goals of the workshop are as follows: (1) to identify the assessment needs of a particular bilingual program; (2) to identify and describe the types of measures that are used to meet these assessment needs; (3) to compare and examine some of these instruments for technical adequacy, curricular relevance, and appropriateness for the student population; and (4) to make recommendations regarding the assessment process of the particular bilingual program. This handbook is intended to enhance the workshop presentations because it offers detailed explanations of the issues and practice of the skills presented in the workshop. (NCR)

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# Bilingual Evaluation Technical Assistance

## Workshop III

## Planning for Student Assessment

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Participant's Handbook

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## Workshop Objectives

1) Identify instructional and legal testing requirements for bilingual programs.

2) Coordinate these requirements to prevent overtesting.

3) Identifying what needs to be assessed.

4) Know criteria for bilingual test selection.

5) Know how to read a technical manual and test printout.

6) Make decisions about tests in context.

## How to Use This Workbook

This workbook provides the following materials:

a) Simulation materials: descriptions of simulated programs, tests, test manuals, and printouts.

b) Checklists, diagrams, charts illustrating important points of the discussion.

c) Checklists, diagrams and charts which you will use in completing the workshop exercises.

The instructions for using each of these materials will be provided by the workshop leader.

The discussion and practice sessions of the workshop discuss the major points covered in the text. However, the text offers a broader and more detailed explanation of these issues. It also includes additional diagrams and information sources which are not covered in the workshop.

## Pre-Workshop Preparations

The following suggestions for pre-workshop preparation are designed to help you obtain the highest benefit from the workshop activities. They are not obligatory nor essential for your participation in the workshop; they are merely guidelines.

1. Read the text and make a note of those issues which are unclear or which you would like more information on. Since the text has been written on a general level in order to reach a broad audience, it's possible that some of your specific needs and problems have not been addressed fully. By reading the text before the workshop, you can have a "mental list" of those issues you would like to discuss in the workshop. A checklist of workshop goals has been provided (page 2 ).

2. Make a list of your personal goals and objectives for the workshop. During the introductory statements, see if they coincide with the goals and objectives stated by the workshop leader (page 6 ).

3. Determine whether you can and want to work with information from your own program or whether you prefer to use the simulated program data. The workshop activities will be th same for both information sources. If you intend to use your own data, look at the "Information Needs List" to make sure you have all you need.

Pre-Workshop Preparation Questions

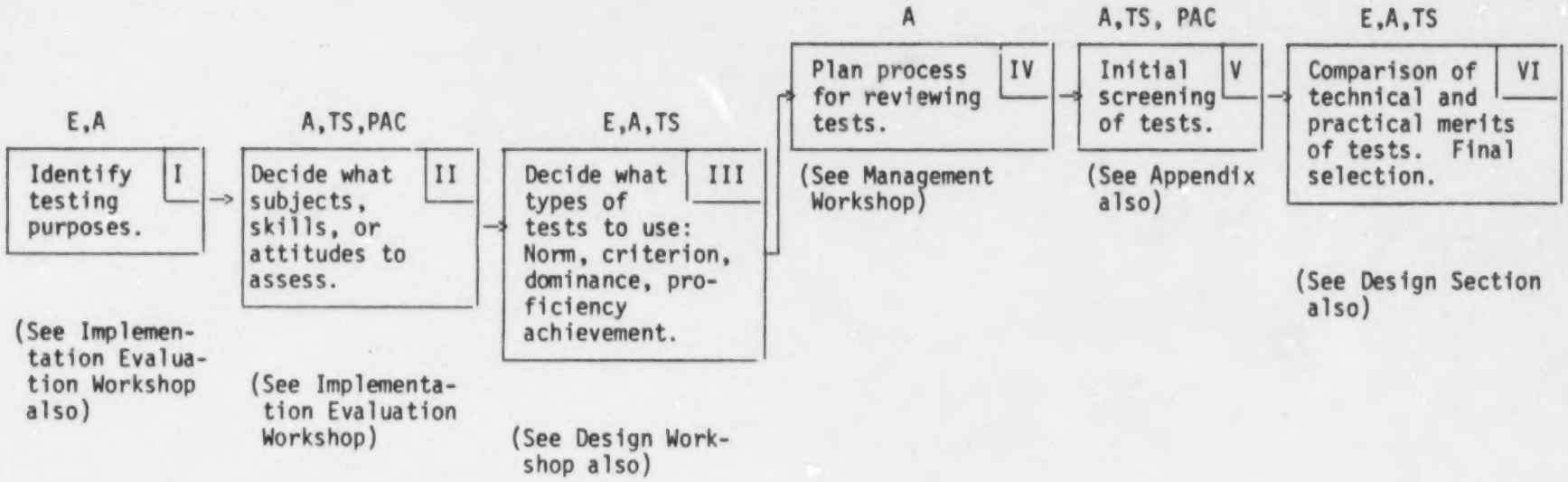
## List of Workshop Goals

| Directions | Specific District Needs |
| --- | --- |
| As stated by workshop leader | Personal goals |
| Identify the assessment needs of your bilingual program. | |
| Identify and describe the types of measures which are used to meet these assessment needs. | |
| Compare and examine some of these instruments for technical adequacy, curricular relevance and appropriateness for the student population. | |
| Make recommendations regarding the assessment process in your bilingual program. | |

NOTES

Materials for Introduction

Figure 1


E,A
Identify testing purposes. I
(See Implementation Evaluation Workshop also)
A,TS,PAC
Decide what subjects, skills, or attitudes to assess. II
(See Implementation Evaluation Workshop)
E,A,TS
Decide what types of tests to use: Norm, criterion, dominance, proficiency achievement. III
(See Design Workshop also)
A
Plan process for reviewing tests. IV
(See Management Workshop)
A,TS, PAC
Initial screening of tests. V
(See Appendix also)
E,A,TS
Comparison of technical and practical merits of tests. Final selection. VI
(See Design Section also)

E = evaluator
A = administrator
TS = teaching staff
PAC = parent advisory committee

Materials for Stage 1:

Identifying Testing Needs

Figure 2

List of Federal and State Requirements

| | |
|---|---|
| 1. | 1. |
| 2. | 2. |
| 3. | 3. |
| 4. | 4. |
| 5. | 5. |
| 6. | 6. |

Once you have listed these requirements, compare the two lists for the following:

- What assessment purposes do these requirements reflect? Placement, progress monitoring, achievement testing?
- What specific subjects or skills need to be assessed?
- Is assessment through standardized (formal) testing necessary? Or can the information be adequately obtained through other sources such as surveys, school grades or some other form of assessment?
- Whay types of comparisons are necessary?
- Do these requirements seek information about individual students or groups?
- Where do these requirements overlap in terms of: assessment purpose, subject/skills which need to be assessed/types of comparisons to be made?

List of Student Assessment Needs

| Testing Purposes | Subjects/Skills | Group/Individual |
|---|---|---|

Figure 3

| Types of Assessment | Instructional Programatic Decisions | Factors being Assessed | Language of Measurement |
|---|---|---|---|
| Language Assessment | 1. Entry<br>2. Instructional Placement<br>3. Exit | Listening Comprehension<br>Speaking Fluency<br>Reading Comprehension<br>Writing | L1 & L2 |
| Achievement | 1. Monitoring students learning<br>2. Program Evaluation | Language Arts<br>Math<br>Social Studies<br>Sciences | Language in which instruction is given |
| Special Bilingual Education Programs | 1. Psychological Diagnoses<br>2. Instructional Placement | IQ Tests | Students strongest language |

Figure 4

Mapping Out The Testing Plan

| | PURPOSE | SKILLS TESTED | TEST SCHEDULE |
|---|---|---|---|
| PLACEMENT | Initial eligibility of students. | Language proficiency or dominance. Language skills in native language and English. | Beginning of each semester, or at least every fall semester. |
| PLACEMENT | Further testing of intermediate & advanced LEP for placement within the bilingual and/or monolingual programs. | Further tests in English language skills (either proficiency or achievement). Tests in other subject areas (i.e., math) either in English or native language. | Beginning of the semester. |
| INSTRUCTIONS | Classroom teacher assessment of students for placement in appropriate reading, math or other subject group. | May be an informal appraisal by teacher. Previous test scores may be used or a teacher developed test. | Beginning of school year or of each semester if student(s) is new to the classroom or program. |
| INSTRUCTIONS | Exit/transfer of students either within the program or out of the program. | Assessment of English language skills using either a proficiency or achievement test. Possible assessment of skills in other subject areas in English. | End of each semester. |
| EVALUATION | Progress monitoring of students. | Usually daily or continual appraisal by teacher through classroom tests, etc. Some schools do additional testing in subject areas such as science & social studies. | Continuing (by teacher) or annually (if by school district). |
| EVALUATION | Achievement testing for funding of other purposes. | Standardized achievement tests in reading and math in English and/or the native language. | Either pre/post at beginning of fall & end of spring semesters or, annuually in spring semester. |

Materials for Stage 2:

What to Test

Project 121

Setting:

This project is part of a large urban school district which has been divided into several "areas" in order to make the management and evaluation processes more wieldy. This bilingual project serves an inner city "area" where most of the population is comprised of minorities. The project has provided bilingual programs for Chinese, Philipino and Portuguese for 7 years. Recently there has been an influx of Vietnamese.

Evaluation deadlines: It is now September, 1982. Placement scores for the local funding source requirements must be turned in by February 15, 1983. State achievement scores are due by May 25, 1983.

State: Normative data on achievement scores on: English language skills and math, social studies and science in English.

For LES/NES who are unable to take achievement tests in English, pre and post test scores of their progress on English language skills and math in the native language.

Local: Placement test scores on reading and listening comprehension, speaking and writing in English.

Placement test scores on language skills, math and science in the native language.

Pre and post scores on student progress in English language skills.

Program Description Goals

Jr. High: - 2 schools: Both schools have transitional programs for all language groups except the Vietnamese, who attend ESL.

transitional - 4 years

ESL - 3 years

High School - 2 schools: One school has a transitional program for Philipino and ESL for other language groups.

transitional - 2 years

ESL - 1 year

High School: Transitional Program Goals:

1. To develop and expand upon the students' acquisition of second language skills by using the primary language as a vehicle for instruction.
2. To develop student skills in other academic areas such as social studies, math, science, etc.
3. To help students and parents develop an understanding of this educational system by fomenting communication between the school and the parents.

STAFF

1 full-time director

1 curriculum specialist

1 roving reading specialist

Jr. High: 2 bilingual Chinese/English credentialed teachers

1 bilingual English/Philipino teacher who is not credentialed and team teaches with a monolingual English teacher who is credentialed.

1 bilingual Portuguese/English teacher (credentialed)

1 monolingual English teacher for ESL

High School: 1 bilingual English/Philipino credentialed teacher

3 monolingual teachers for ESL

Materials: All levels

Chinese (Cantonese): There are some U.S. developed materials in Mandarin and Cantonese; however, more need to be developed. Teachers have been adapting foreign materials and hopw to develop more of their own.

Philipino: (Ilokano and Tagalog): The secondary schools must adapt materials developed in the Philippines.

Portuguese: There are materials developed in Portugal which have been adapted by the teachers. There are not enough U.S. developed materials, particularly at the secondary levels. Assessment instruments to determine language dominance and proficiency are available but none for diagnostic purposes or for assessment of achievement in content areas other than the language.

Leawood School District

Setting

This is a suburban school district where minority populations are steadily increasing due to a growing supply of good steady jobs at nearby factories. Although the general population is stable, there is an increasing problem of student attrition at the higher grade levels. Consequently, the program is increasing its emphasis on cultural awareness and positive interaction among students of different ethnic groups. A work experience program has also been initiated in order to allow students who must work the opportunity of finishing their high school program. In addition, a new component has been added to promote communication between the community and the school.

Evaluation Assessment Requirements

Funding: Title VII, T I, TIV

Evaluation deadlines: It is now August, 1982 and you are ready to start planning the evaluations for the forthcoming academic/fiscal year. All evaluations are due by July 31, although you might be able to postpone the TVII evaluation to August 31. The title VII monies are used in the elementary school program only. Title I and IV fund all schools in the district.

Requirements for Student Assessment:

Title I: - comparative data showing student growth in math, reading and writing skills in English.

State/Local:

-

Title VII:- comparative data on reading comprehension, writing and math in English, and/or the native language.

Type of program and length of time in operation

Elementary school: K-6 maintenance program - 6 years

190 Spanish-dominant students in total

45 Non-English proficient and beginning Limited English speaking

125 Beginning and intermediate limited English proficient

Junior High school: 7-9 English As a Second Language Program - 2 years

70 Students total

24 Non-English proficient and limited English speaking

36 Intermediate limited English proficient

10 Advanced limited English proficient

High School: 9-12 English as a Second Language Program - 2 years

40 Students total

34 Beginning and intermediate limited English proficient

6 Advanced limited English proficient

Program Goals

Elementary: 1. To teach children sufficient skills in math and English language skills to enable them to receive instruction in the monolingual English classrooms and perform successfully.

The definition of 'success' here is that the 'bilingual students' achieve at the same level or better as the average monolingual English speaking student in the regular program.

This goal is to be attained within three years after the student's point of entrance in the program. Students who enter the program later than 2nd grade may need an additional year.

2. To teach students in their native language and in English, sufficient skills and give them adequate knowledge in other subjects such as: social studies, science and math.

3. To aid students in the attainment of equal competency in English and the native language.

Junior High and High school ESL programs:

1. Students will learn sufficient English language skills to enable them to receive instruction in the regular program.

   This goal should be attained within one to two years after entering the ESL program, depending on the student's level of entry.

2. As student's skills in the English language increase, they will participate in regular classrooms in other subject areas such as math and social science. Student's ability to participate in these classrooms will be determined through teacher judgement and assessment.

3. To develop student self concept and cultural pride.

Teaching Staff:

Elementary: 3 bilingual credentialed teachers
1 bilingual non-credentialed teacher who team teaches with
1 monolingual English credentialed teacher.
2 bilingual aides
2 monolingual Spanish aides

Junior High: 2 bilingual teachers with ESL certificates and a state credential

High School: 1 bilingual teacher with ESL certificate and a state credential

Materials:

There are plenty of instructional materials available for the K-6 grades. However, secondary materials are scarce and teachers most either adapt foreign-developed materials or make up their own.

Assessment instruments are also plentiful at K-6 levels. There aren't as many at the secondary level.

Worksheet:

Categories of Assessment Instruments

| Name of Test | Test Use | | Score Interpretation | | Content | | |
|---|---|---|---|---|---|---|---|
| | Standardized | Other | NRT | CRT | LP | LD | Other |
| | | | | | | | |
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Materials for Stage 3:

Initial Screening of Tests

Test Selection Terminology

1) Validity: A test is valid if it measures what it purports to measure. The operational definition of the variable to be assessed is therefore important; for example, that the linguistic skill or the structure of skills, such as the rules of grammar, are clearly defined in terms of observable behavior. When a test purports to measure "ability to function effectively in the classroom," yet only assesses reading abilities, it is not a valid test of "ability to function effectively" because a student may be able to read English with comprehension but not able to comprehend spoken English or able to communicate in speech interactions in English.

2) Translated Tests: Another type of test which should be viewed with caution is the translation to another language of a test of achievement, vocabulary, or cognitive abilities developed in English and normed only in English. A translation into the native language may not provide a comparable test since the frequency of usage of the words in the native language, and hence their difficulty, is different from the frequency/difficulty of words in English; thus the norms of the test in English do not apply to the translation to the native language.

Similarly, a standardized achievement test in English, if translated to another language, is no longer the same valid, reliable, standardized achievement test, since the difficulty of the vocabulary in the translation has not been determined. A process of field testing and item analysis of the new, translated items would have to be conducted to ascertain its validity and reliability.

3) Linguistic and cultural appropriateness: Does the test content, language or visual stimuli contain anything which could be offensive, misleading or unfamiliar to the target population? In the native language version of the test, is the level and regional variety of the language appropriate for your student population? Sometimes these characteristics are not obvious, either because the reviewer must be very familiar with the target population's language and culture, and/or because they are embedded in the test directions or test items. Thus, tests should be carefully reviewed by persons who are familiar with the language and culture of the target populations, and if possible, with the students.

4) Format and test directions: Particularly when the students to be assessed are of elementary school age, the format of any test should be carefully considered. The size of type and the size and clarity of pictures are two important criteria to prevent confusion by students taking the test. Furthermore, reviewers should make sure that objects and activities which are illustrated on the test are familiar to the target population. For example, students who have always lived in a rural agricultural society may not know what skyscrapers, subways, escalators and other objects typical of an urban environment are. Students who have always lived in Southern California, for example, may have never seen or heard of a basement or furnace. Hence, if these words were necessary to know in order to pass a vocabulary or comprehension test, these students would be at a disadvantage.

Adequate spacing of items on a page is also important for clarity. The mode of responding to a test is another significant feature. In tests with a multiple-choice format, the required responses of circling, or Xing, or filling in one of the computer-scoring circles must be ones that the students are able to perform.

Some tests for bilingual students have been developed with parallel versions in two languages presented on facing pages of the same test. While this idea seems plausible since a student might not know a word in one language and could refer to the other language, in practice it can be confusing and time-consuming for the student who reassures himself or herself each time of the interpretation of one test passage by reference to the other. Since personality variables may lead to outcomes which do not reflect the achievement of content or skills, the format of this kind of "bilingual" test is not recommended.

5) Test Directions: Language assessment tests are often carefully constructed in terms of the sequencing of sentence structures from simpler to more complex, yet the directions of the test are sometimes of much greater complexity than the material to be tested. In taking a subtest of a frequently used language achievement test, for example, the student must listen and comprehend 228 words of directions before responding to the test's single word items. Complex test directions can therefore be

a stumbling block for students. The real test becomes understanding and following the test directions rather than answering the test items. The testing of math skills, for instance, is often embedded in written examples whose directions change with each example. Therefore not only math skills, but comprehension of verbal material, is being assessed. Understanding changing directions is a skill in itself, and teachers might consider devoting teaching time to test-taking skills. A recent study by the Federal Trade Commission has shown that standardized test results including certain aptitude tests, are vulnerable to improvement after coaching students in test taking skills.

6) Administrator Qualifications and Training: The test to be selected must also be viewed with the potential test administrator in mind. For example, some tests require administration by a psychologist specifically trained to administer and interpret the test. If such tests are necessary, then arrangements must be made to locate appropriately trained test administrators. If not, then tests which can be administered by available trained staff need to be selected. Other criteria for administrators should be considered, such as the administrator's fluency in the student's native language and familiarity with the student's culture.

7) Scoring: Can the tests be hand scored or must they be machine scored? If you desire to obtain results as soon as possible, hand scoring may be a solution. However, the scoring system should be sufficiently simple to allow this. Scoring procedures are especially important in language proficiency tests because the scoring is frequently done as the test is administered. Other tests have the test administrators rate individual responses as they give the test, but total the responses at the end of the testing period. If the test administrator scores the test, what mechanisms for establishing inter and intra rater reliability does the test have? Some tests have practice exercises to insure that all test administrators are folloiwng the rating system accurately and consistently. Other tests insure scoring accuracy by precisely indicating possible answers or responses. Test reviewers should look at these features for accuracy, fairness and ease of administration and scoring. Reviewers should also look at how the items or subtests are weighted, and whether the test's weighting system corresponds to their curricular and instructional priorities.

8) Test Level:

A) Out of Level Testing. For limited English proficiency students, for whom English is a second language, the level of an achievement test is an important consideration. Since limited English proficiency students are not usually represented in the norming sample when a standardized achievement test is developed, the test, strictly speaking, is not a valid indicator of their level of achievement until their mastery of English becomes equivalent to that of the monolingual English speakers who formed the norming sample.

When students are acquiring English as a second language and need to be administered a standardized achievement test, out-of-level testing is recommended. If students are in fifth grade, then a third grade test may provide a better arena for the students to demonstrate the skills they have acquired. There should be greater opportunity to do so because they are learning English as a Second Language and their vocabulary would be more like that of the third grade monolingual English speaker than a fifth grade English monolingual student.

B) Alternate-forms. Sometimes alternate forms of a test are developed to provide parallel but different forms for a pretest and posttest. Both forms can be administered to the same set of students so that the correlations of the rank order of the student on both forms can be established to provide the reliability coefficient.

Time. One of the constraints faced by most evaluators is that of limited time. Thus, the time that assessment will take is an important constraint. Evaluators are usually asked to obtain the most data possible from assessment which takes the least amount of time. In planning a comprehensive evaluation, estimates of the time each instrument will need for both administration and scoring, and a summation of these estimated times for all the tests to be administered, multiplied by the number of students receiving these tests, is necessary to obtain an estimate of the total time for assessment.

Group or Individually Administered Tests. Another issue to be considered in test selection, which is related to time, is whether the test can be administered to a group or whether it must be individually administered. The test catalog can give that information for each test. Then the evaluator must consider which mode is necessary for accurate assessment. One criterion for determining whether the evaluator needs to invest the extra time that individual assessment necessitiates is to consider the significance of the outcome of the testing. If the purpose is ongoing monitoring of student progress, and a group-administered test can be found which serves that purpose and reflects the curriculum, then it is entirely appropriate. If the purpose of testing is more significant, for example, whether or not placement in a bilingual program is prescribed for a student, then the greater time required for individual assessment is justified.

9) Cost: The costs of the purchase of tests, training test administrators, training for scoring and interpretation, or for computer-scoring, and group data analysis and documentation are all factors which need to be considered in estimating costs.

Mock-ups of
Language Assessment
Tests

## Test A - General Description

This test consists of several pictures of a dog, a boy and a girl involved in different activities. The test administrator asks the student a few questions about each picture, as indicated by the instructions in the administrator's manual. The administrator must write or record each response completely. Possible responses to each question are provided in the administrator's manual as examples. However, any logical, correct response which shows that the student understands the question and can respond accordingly, should receive points.

The questions in the Native Language are a translation of the questions in English. Figure 3-B is a list of the test questions. The left hand column indicates their point value. The column on the right describes the grammatical features which the question examines The questions are divided into five levels of dominance/proficiency. These are:

Language Levels

| | |
|---|---|
| I | Non-English or Native Language Proficient: The student understands most of the questions but has much difficulty in answering them. Answers consist of "yes" or "no" or a single noun or verb. |
| II | Very Limited English/Native Language Proficient: The student understands most of the questions but has much difficulty in answering them. Answers consist of "yes" or "no" or a single noun or verb. |
| III | Limited English/Native Language Proficient - Intermediate: Student understands and responds to most questions with some difficulty. The student needs work on some basic grammar, such as the use of the progressive and past tenses. |

IV Limited English/Native Language Proficient - Advanced: Student understands and responds to questions well. However, he/she needs more work on difficult grammatical aspects such as the subjunctive mood, use of the past participles and possessives.

V Fluent English/Native Language Proficient: Student understands and responds to questions as well as a native speaker. Accent (if one is present) does not interfere with the clarity of the student's responses.

The students' language proficiency must be measured and categorized separately for each language. Thus, it is possible for a student to be category II in English and V in the Native Language, or for the student to belong to the same category in both languages. A "bilingual" must fall into categories IV/or V in both languages.

Scoring

As you can see in Figure 3-A, each question has been assigned a certain number of points. In scoring the questions, either all or none of the points must be given. A question must be grammatically and logically correct in order to receive full points. Notice that some questions are set off by a triangle. These are "key" questions. If a student responds to these questions correctly, then he/she may automaticaly fall into categories III or IV. On the following page is a breakdown of the points and their corresponding language levels.

Figure 3-A

| Number of Total Points | Corresponding Language Level |
|---|---|
| 5 or less | I |
| 1-5 | II |
| 9-13 | III |
| 19-27 | IV |
| 33-39 | V |
| Correct responses to #4, 5, and 6 (14 points) | III |
| Correct responses to the above and #10 and 11 (26 points) | IV |

Test Administration

Test administrator should be bilingual and should administer both the English and Native Language to each student. Allow 10-15 minutes for administering the test in each language. Administrators must score each response on the spot.

Test Cost

$16.00 per package of 35 Student Response sheets and 1 picture package. The Examiner's manual is $2.50.

Figure 3-B

Test A

Questions for Levels I & II

| Point Value | | | |
|---|---|---|---|
| 1 | 1. | What is that?<br>(It is a dog) | Simple sentence with singular noun in present tense. |
| 2 | 2. | What is it doing?<br>(It is playing with the children) | Simple sentence with ing form of verb. Prepositional phrase, plural |
| 2 | 3. | What are they playing?<br>(They are playing baseball) | Simple sentence, plural subject |
| 4 | 4. | Why is the girl crying?<br>(She is crying because she fell) | Compound sentence, past tense, conjunction |
| 4 | 5. | Why is the dog jumping on the girl?<br>(Because he wants to lick her tears/make her happy | Opinion/conjecture, past tense, complex sentence |
| | | Level IV | |
| 6 | 6. | What could she have done to prevent from falling?<br>(She could have been careful) | Would/could + past participle |
| 2 | 7. | Whose skates are those?<br>(Their skates((they belong to them))) | Past tense, possessive |

| | | | |
|---|---|---|---|
| 2 | 8. | What are they doing with the skates?<br>(They belong to them) | Past tense, possessive |
| 4 | 9. | What did they do with their shoes?<br>They left them on the grass | Past tense, plural, prepositional phrase |
| | | Level V | |
| 6 | 10. | What would you have done with your shoes?<br>(I would have...) | Subjunctive, past tense opinion |
| 6 | 11. | What do you think you would do if you went roller skating? | Subjunctive, complex sentence |

## Test B - General Description

This instrument consists of six subtests in English and in the native language. They are:

1. Speaking skills
2. Listening comprehension
3. Reading comprehension
4. Writing
5. Math computation
6. Math concepts and application

Each subtest is described below:

Speaking skills: 30 points total

The examiner shows the student a picture card. He or she asks the student to respond to one question about the picture. If the student cannot correctly respond on the first try, the examiner will then ask him/her to verbally "fill in" the missing words to the response sentence. This test seeks very specific structures in the responses. According to the scoring procedures, a response must be completely correct grammatically and be as close to the specific response sought as possible. All answers are weighed equally. There is a total of 30 points, 15 questions. The following is the language category breakdown for this subtest only.

0-4 correct answers (0-8 points) = Non-English speaker

4-12 correct answers (10-24 points) = Limited English speaker

13-15 correct answers (26-30 points) = Fluent English speaker

The examiner must score each response as it is given. Responses are not recorded or written. See page 35 for a breakdown of the objectives this test examines.

Testing time: 10 minutes, each language

Listening comprehension: 30 points total

This test consists of two parts. In Part One, students are read 2 pairs of words which differ in only one phoneme (such as, bet/pet: mat/mate). Students are to indicate which alternative (A or B) has the phoneme which was indicated by the examiner. For example, the examiner says,

"Which of the following words begins with the sound /p/?
A. bet, or B. pet? Bet/pet."

In the second part of the test, the examiner asks the students to find the word that contains the same initial, middle or final sound as the word he/she gives. For example, the examiner says:

"Which of the following words begins with the same sound as "yellow":

a. yelp
b. runt
c. meld
d. gain

There are a total of nine items. All items are equally weighted.

Objectives tested:

initial consonant blends/consonants - test #1, 3 items, text #2, 7 items

intermediate vowel sounds - test #1, 3 items, test #2, 7 items

final sounds - test #1, 3 items, test #2, 7 items

Testing time: 30 minutes, each language

Scoring breakdowns:

0-10 = non proficient
10-25 = limited proficient
26-30 = proficient

Reading comprehension subtest: 8 points total

Students are given short passages to read. They must answer the question written below each passage and choose from four alternatives which are also written below each passage.

Objectives tested:

identify explicit main idea in passage - 2 items

infer main idea in passage - 2 items

identify a detail which is explicitly stated in passage - 2 items

infer a conclusion to a question about the passage - 2 items

Testing time: 1 hour, each language

Scoring breakdown:

0-2 = non-proficient
3-6 = limited proficient
7-8 = proficient

Test administration

Test administrator should be bilingual and have experience in test administration.

Test cost

The cost for a package of 35 complete tests is $45.00. This includes:

35 student response sheets for all subtests
1 examiner's manual, including instructions for all subtests
1 set of picture prompts for the Oral Language Test

Materials for each subtest package are $6.00 for a package of 35. These include:

35 student response sheets
1 examiner's manual

The picture prompts for the Oral Language Test are $2.40 when bought separately.

Scoring services:

Manual scoring keys for all subtests except the Oral Language Tests are available. The cost for a set of 10 keys is $5.00.

The TDC Company also offers the following alternatives for machine scoring:

1. Classroom analysis by mastery of objectives. $5.00 per class
2. Individual student scores by subtest. $2.00 per class of 35
3. Indiviudal student score by item. $1.00 per student
4. District scores by subtest. $10.00.

Costs mentioned above do not include shipping charges.

Writing: 13 points total

Students are asked to write three paragraphs about one of the following topics:
"My home", "My favorite activity", "What I like about school".
The essays will be rated on the following aspects:

1. spelling
2. expression
3. language mechanics
4. basic grammar
5. organization

Testing time: 45 minutes, each language

Scoring breakdown:

0-3 = non-proficient
4-8 = limited proficient
9-13 = proficient

Math: 30 points total

Computation includes 6 items on each of the basic math operations: addition, subtraction, division and multiplication. There are at least two items involving fractions for each operation.

Testing time: 30 minutes, each language

Concepts and applications:

Includes one word problem on each of the basic math operations and 3 questions regarding math concepts.

Testing time: 35 minutes, each language

Scoring breakdown:

0-16 = not proficient
16-38 = limited proficient
33-39 = proficient

Users of the B LS AM Test are not required to use all of the subtests. As you can see, all subtests have their own scoring scales. We have not assigned comparative values or scoring scales among these subtests because we feel that school districts should have the option of deciding which subtests are more important to their curricula and evaluation needs.

Materials for Stage 4:

Using Tests

Sample Printouts

PRINTOUT NO. 1

CLASS SCORE SHEET

TEACHER:

SCHOOL:

SCHOOL ADDRESS:

TEST DATE:

CLASS GRADE:

TEST: THE BILINGUAL LANGUAGE AND MATH SKILLS TEST

TEST LEVEL: 2

TEST FORM: A

KEY TO PRINTOUT ⟶ (RAW SCORE) RS | SS (SCALE SCORE)
(NATIONAL PERCENTILE) NP | GE (GRADE EQUIVALENT)

| STUDENT NAME | BIRTHDATE | LISTENING COMPREHENSION | | TOTAL | READING COMPREHENSION | TOTAL | MATHEMATICS | | TOTAL | TOTAL BATTERY |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 13 \| 331<br>38 \| 27 | 35 \| 481<br>92 \| 59 | 48 \| 405<br>80 \| 43 | 16 \| 376<br>62 \| 36 | | 26 \| 338<br>58 \| 33 | 6 \| 303<br>28 \| 24 | 48 \| 335<br>52 \| 31 | |
| | | 20 \| 385<br>71 \| 39 | 14 \| 380<br>45 \| 29 | 34 \| 367<br>61 \| 34 | 11 \| 336<br>38 \| 27 | | 16 \| 309<br>30 \| 28 | | 27 \| 243<br>14 \| 21 | |
| | | 21 \| 390<br>73 \| 40 | 12 \| 340<br>35 \| 26 | 33 \| 364<br>39 \| 34 | 18 \| 404<br>76 \| 43 | | 9 \| 285<br>14 \| 22 | 11 \| 358<br>57 \| 34 | 38 \| 313<br>34 \| 28 | |
| | | 13 \| 331<br>38 \| 27 | 14 \| 360<br>45 \| 29 | 27 \| 333<br>41 \| 28 | 10 \| 292<br>18 \| 23 | | 4 \| 247<br>5 \| 12 | 3 \| 246<br>8 \| 16 | 17 \| 236<br>2 \| 14 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

PRINTOUT NO. 2

DISTRICT:

GRADE:

EVALUATOR'S SUMMARY LISTING BY DISTRICT

TEST LEVEL: 7

| LINE | | LISTENING COMPREHENSION | READING COMPREHENSION | READING TOTAL | MATH COMPUTATION | MATH APPLICATION | MATH TOTAL | BATTERY TOTAL |
|---|---|---|---|---|---|---|---|---|
| 1 | N COUNT | 1328 | 1341 | 1271 | 1284 | 1221 | 1175 | 7 |
| | MEAN GE | 8.4 | 8.6 | 8.5 | 9.7 | 8.6 | 9.1 | 6.8 |
| | MEDIAN GE | 8.1 | 8.3 | 8.2 | 9.2 | 8.2 | 8.8 | |
| | SGE | 8.4 | 8.4 | 8.3 | 9.0 | 8.4 | 8.9 | 6.7 |
| | STD DEV GE | 2.7 | 2.9 | 2.7 | 2.5 | 2.6 | 2.4 | 3.1 |
| | MEAN SS | 541.5 | 552.5 | 545.4 | 579.0 | 546.1 | 560.3 | 493.6 |
| 2 | MEDIAN SS | 535.3 | 550.1 | 542.3 | 581.4 | 541.1 | 558.3 | |
| | STD DEV SS | 74.1 | 74.5 | 75.6 | 77.5 | 72.9 | 70.5 | 82.4 |
| | MEAN NCE | 42.9 | 44.3 | 43.2 | 48.7 | 42.7 | 45.4 | 29.7 |
| | MEDIAN NCE | 41.3 | 44.1 | 42.4 | 49.3 | 41.2 | 45.1 | |
| | SNCE | 43 | 44 | 43 | 49 | 43 | 45 | 30 |
| | STD DEV NCE | 18.5 | 18.4 | 18.8 | 18.6 | 18.3 | 17.8 | 21.3 |
| | MEDIAN NP | 34.3 | 38.2 | 35.4 | 48.4 | 34.1 | 40.3 | |
| | SNP | 37 | 39 | 37 | 47 | 36 | 41 | 17 |
| | 75%ILE (Q-3) | | | | | | | |
| | GE | 10.3 | 10.7 | 10.5 | 12.5 | 10.2 | 11.1 | |
| | SS | 587.4 | 599.1 | 594.0 | 631.1 | 592.2 | 606.3 | |
| | NCE | 54.4 | 56.1 | 54.9 | 61.1 | 54.3 | 56.6 | |
| | NP | 58.4 | 61.1 | 59.9 | 70.1 | 58.2 | 63.3 | |
| | 50%ILE (Q-2) | | | | | | | |
| 3 | GE | 8.1 | 8.3 | 8.2 | 9.2 | 8.2 | 8.8 | |
| | SS | 535.3 | 550.1 | 542.3 | 581.4 | 541.1 | 558.3 | |
| | NCE | 41.3 | 44.1 | 42.4 | 49.3 | 41.2 | 45.1 | |
| | NP | 34.3 | 38.2 | 35.4 | 48.4 | 34.1 | 40.3 | |
| | 25%ILE (Q-1) | | | | | | | |
| | GE | 6.4 | 6.3 | 6.5 | 7.8 | 6.6 | 7.4 | |
| | SS | 490.7 | 502.0 | 495.9 | 523.6 | 494.2 | 509.6 | |
| | NCE | 30.1 | 32.0 | 30.9 | 35.1 | 30.0 | 32.6 | |
| | NP | 17.1 | 19.0 | 17.9 | 23.6 | 17.3 | 20.0 | |
| | N / QUARTER | | | | | | | |
| | 76-99 | 159 | 185 | 159 | 243 | 152 | 164 | 1 |
| | 51-75 | 285 | 300 | 261 | 392 | 249 | 293 | 0 |
| | 26-50 | 373 | 415 | 395 | 309 | 368 | 331 | 1 |
| 4 | 1-25 | 511 | 441 | 456 | 340 | 452 | 387 | 5 |
| | % / QUARTER | | | | | | | |
| | 76-99 | 12.0 | 13.8 | 12.5 | 18.9 | 12.4 | 14.0 | 14.3 |
| | 51-75 | 21.5 | 22.4 | 20.5 | 30.5 | 20.4 | 24.9 | 0.0 |
| | 26-50 | 28.1 | 30.9 | 31.1 | 24.1 | 30.1 | 28.2 | 14.3 |
| | 1-25 | 38.5 | 32.9 | 35.9 | 26.5 | 37.0 | 32.9 | 71.4 |

PRINTOUT NO. 3

SCHOOL: SCHOOL SUMMARY TEST:

DISTRICT: TEST LEVEL:

STATE: SUBTEST: MATHEMATICS GRADE:

## NON ENGLISH PROFICIENT

MEDIAN AND QUARTILE VALUES

| | SCHOOL | | STATE | | DISTRICT | |
|---|---|---|---|---|---|---|
| | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % |
| 3RD QUARTILE | 72.0 | 35 | | | | |
| MEDIAN | 49.0 | 15 | | | | |
| 1ST QUARTILE | 48.0 | 14 | | | | |
| NUMBER | 2 | | | | | |

DISTRIBUTION

| NATIONAL PERCENTILES | SCHOOL NUMBER | SCHOOL % | STATE NUMBER | STATE % | DISTRICT NUMBER | DISTRICT % |
|---|---|---|---|---|---|---|
| AT OR BELOW 75 | 2 | 100.0 | | | | |
| AT OR BELOW 50 | 2 | 100.0 | | | | |
| AT OR BELOW 25 | 1 | 50.0 | | | | |

## COMBINED LIMITED AND FLUENT ENGLISH PROFICIENT

MEDIAN AND QUARTILE VALUES

| | SCHOOL | | STATE | | DISTRICT | |
|---|---|---|---|---|---|---|
| | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % |
| 3RD QUARTILE | 76.4 | 39 | | | | |
| MEDIAN | 59.4 | 23 | | | | |
| 1ST QUARTILE | 46.5 | 13 | | | | |
| NUMBER | 137 | | | | | |

DISTRIBUTION

| NATIONAL PERCENTILES | SCHOOL NUMBER | SCHOOL % | STATE NUMBER | STATE % | DISTRICT NUMBER | DISTRICT % |
|---|---|---|---|---|---|---|
| AT OR BELOW 75 | 133 | 97.1 | | | | |
| AT OR BELOW 50 | 124 | 90.5 | | | | |
| AT OR BELOW 25 | 70 | 51.1 | | | | |

## LIMITED ENGLISH PROFICIENT

MEDIAN AND QUARTILE VALUES

| | SCHOOL | | STATE | | DISTRICT | |
|---|---|---|---|---|---|---|
| | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % |
| 3RD QUARTILE | 73.2 | 36 | | | | |
| MEDIAN | 59.2 | 23 | | | | |
| 1ST QUARTILE | 40.2 | 9 | | | | |
| NUMBER | 51 | | | | | |

DISTRIBUTION

| NATIONAL PERCENTILES | SCHOOL NUMBER | SCHOOL % | STATE NUMBER | STATE % | DISTRICT NUMBER | DISTRICT % |
|---|---|---|---|---|---|---|
| AT OR BELOW 75 | 51 | 100.0 | | | | |
| AT OR BELOW 50 | 49 | 96.1 | | | | |
| AT OR BELOW 25 | 26 | 51.0 | | | | |

## FLUENT ENGLISH PROFICIENT

MEDIAN AND QUARTILE VALUES

| | SCHOOL | | STATE | | DISTRICT | |
|---|---|---|---|---|---|---|
| | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % | RAW SCORE | NAT'L % |
| 3RD QUARTILE | 79.3 | 44 | | | | |
| MEDIAN | 59.5 | 24 | | | | |
| 1ST QUARTILE | 46.7 | 13 | | | | |
| NUMBER | 86 | | | | | |

DISTRIBUTION

| NATIONAL PERCENTILES | SCHOOL NUMBER | SCHOOL % | STATE NUMBER | STATE % | DISTRICT NUMBER | DISTRICT % |
|---|---|---|---|---|---|---|
| AT OR BELOW 75 | 82 | 95.3 | | | | |
| AT OR BELOW 50 | 75 | 87.2 | | | | |
| AT OR BELOW 25 | 44 | 51.2 | | | | |

SIMULATED TEST MANUAL

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PART I

TEST DEVELOPMENT

Content selection: The TUF test editorial staff wanted to ensure that all item content is relevant to the majority of the instructional curricula used in schools today, particularly with regard to instructional materials for reading. Consequently, fourteen of the most commonly used reading programs and ten popular math instructional programs were analyzed for the types of objectives, item stimulus and content they contained.

Item writing: The TUF test company convened a panel of 40 experienced teachers (K-12) to write and select items. They were given a list of objectives (see page 53) and asked to write items according to specifications given previously. Afterward, the panel reviewed the item pool and selected those items to be field tested. Tests were constructed using these items.

Field testing: Tests were constructed using the items selected by the panel. The tests were field tested throughout the nation with a population of 113,921 students spread in the main geographical locations of the United States.

Criteria for item selection: Data were collected from one to three grade levels for each item. Each item had to fulfill the following criteria for selection:

1. The difficulty of a test item should be greater than .30 for the highest grade for which it is designed. (This means that 30 percent of the students answered correctly.)
2. The reliability of the test should be higher with the item included than it would be if the item were excluded.
3. The item should be easiest for the highest grade for which it is designed and most difficult for the lowest grade.

4. The point-biserial correlation coefficient should be greater than +.20. This is obtained by correlating the examinees' responses to a test item with their total number of correct responses to the test.

5. The test mean for students choosing the correct response to an item should be greater than the test mean for those choosing the distractors.

PART II

STANDARDIZATION PROCESS

Procedures for School Selection

A cross section of schools from all 50 states was selected on the basis of: georgraphic location; demographic characteristics of the community; enrollment size in grades 1-12; size of the school district. Within each state, the school districts were divided into four categories according to the number of students enrolled at the elementary and secondary school levels. Figure 1 indicates the number of students according to grade levels, geographic locations and whether they were in urban or rural areas.

Minority Group Representation

Representative samplings of Hispanics (Mexican-American, Puerto Rican and Cuban); Blacks, Asian-Americans (Chinese American, Japanese American, Southeast Asian and Pacific); and Native Americans (Navajo, Cherokee, Sioux, Eskimo-Aleut) were included. Each student sample included a percentage of each minority group which was comparable to the percentage each group comprised in the overall state population. Figue 2 represents the percentage of minority group populations by grade level.

Test/Retest Reliability and Coefficients

Sampling procedures: The TUF test was piloted with 313,921 students from the first through the twelfth grades. They were selected through stratified random sampling procedures from public schools throughout the continental United States. Students were tested during September and October 1979 and again in March and April of 1980. Both norm groups included the same students. Only those students who received both the pre- and post-test were included in the sample.

FIGURE 1

Description of Standardization Sample

| Test Level | School Grade | West | | Southwest | | Midwest | | Southeast | | Mid & Northeast | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | |
| A | 1 & 2 | 3,130 | 2,127 | 2,611 | 2,817 | 1,783 | 1,672 | 2,761 | 2,614 | 4,325 | 2,227 | 26,067 |
| B | 3 & 4 | 3,201 | 2,158 | 2,905 | 2,773 | 1,987 | 1,963 | 2,988 | 2,807 | 5,318 | 3,221 | 29,351 |
| C | 4 & 6 | 3,954 | 2,334 | 3,318 | 3,065 | 2,321 | 2,211 | 3,913 | 3,805 | 6,193 | 4,321 | 29,435 |
| 1 | 7 | 3,782 | 3,963 | 3,411 | 3,291 | 2,731 | 2,634 | 3,402 | 3,401 | 6,353 | 5,487 | 41,773 |
| 2 | 8 | 4,566 | 4,211 | 3,432 | 3,321 | 2,689 | 2,621 | 3,399 | 3,289 | 5,983 | 5,832 | 37,352 |
| 3 | 9 | 4,432 | 3,987 | 3,575 | 3,521 | 2,521 | 2,333 | 3,461 | 3,410 | 5,723 | 6,945 | 39,808 |
| 4 | 10 | 4,976 | 3,542 | 3,472 | 3,433 | 2,472 | 2,328 | 3,803 | 3,860 | 6,322 | 6,784 | 30,992 |
| 5 | 11 | 4,787 | 3,653 | 3,781 | 3,321 | 2,683 | 2,593 | 3,722 | 3,698 | 6,293 | 5,935 | 39,466 |
| 6 | 12 | 5,211 | 3,883 | 3,624 | 3,372 | 2,730 | 2,244 | 3,551 | 3,142 | 5,844 | 6,076 | 39,677 |

TOTAL 313,921

West: California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming

Southwest: Arizona, New Mexico, Oklahoma, Texas

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

Southeast: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia

Mid & Northwest: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

Figure 2

Percentage of Minorities in TUF Test Norm Groups

| | Ethnicity | | | | |
|---|---|---|---|---|---|
| Test Level | Hispanic | Black | Asian | Native American | *% |
| A | 11% | 14% | 3% | 2% | 30% |
| B | 9% | 11% | 7% | 3% | 30% |
| C | 15% | 23% | 8% | 1% | 47% |
| 1 | 7% | 9.8% | 2% | 1.2% | 21% |
| 2 | 8% | 12% | 2.5% | 1.3% | 23.8% |
| 3 | 6% | 11% | 4% | 2% | 23% |
| 4 | 4% | 10.5% | 2% | 1% | 17.5% |
| 5 | 5.3% | 13% | 3% | .78% | 8.08% |
| 6 | 6.2% | 12% | 2.9% | .73% | 21.83% |

*These numbers represent percentages out of the total population sampled for each grade level

Internal consistency was determined by the use of the Kuder-Richardson formula #20 for each grade in the standardization of Form A. The tables for Form A include standard errors of measurment in raw score, Scale Score, and grade equivalent units, see Figure 3.

The data reported in Figure 3 include the following:

1. Raw Score Means and Standard Deviations

   The raw score means and standard deviation for the grade at each level for a sub-sample of the total standardization sample.

2. Internal Consistency (KR #20's)

   The reliability coefficients computed by using the Kuder-Richardson formula #20 are based on the sub-sample data. They give evidence of the internal consistency of the scores for all tests, skills areas, and the total batteries.

3. Standard Errors of Measurement (Raw Score, Scale Score, and Grade Equivalent Units)

Correlation Coefficients: Pearson product-moment correlation coefficients resulting from correlating raw scores on the TUF test, form A, levels B and C with scores on the National Achievement Test (NAT) are presented in Figure 4. The sample was taken from a large urban school district. Students were pre and post-tested within a 4 to 6 week period. The NAT was selected because it is a widely used basic skills achievement test. They also included approximately 33% minority representation in their sampling populations.

Figure 3

KR #20's, Means, Standard Deviations, and Standard Errors of Measurement in Raw Score, Scale Score, and Grade Equivalent Units for a National Sample

| TUF Level Test or Total | No. of Items | N | Raw Score | | Grade KR #20 | Standard Error of Measurement | | |
|---|---|---|---|---|---|---|---|---|
| | | | Mean | SD | | Raw Score | Scale Score | Grade Equivalent |
| READING | | | | | | | | |
| 1 Vocabulary | 40 | 398 | 14.7 | 8.38 | .90 | 2.68 | 17.04 | 0.34 |
| 2 Comprehension | 45 | 397 | 19.4 | 9.92 | .92 | 2.89 | 21.47 | 0.38 |
| TOTAL | 85 | 397 | 34.2 | 17.35 | .95 | 3.97 | 13.80 | 0.25 |
| LANGUAGE | | | | | | | | |
| 3 Mechanics | 25 | 398 | 10.1 | 5.16 | .82 | 2.20 | 30.76 | 0.48 |
| 4 Expression | 30 | 395 | 13.8 | 6.76 | .88 | 2.34 | 26.78 | 0.52 |
| 5 Spelling | 30 | 394 | 12.0 | 6.33 | .87 | 2.29 | 21.77 | 0.39 |
| TOTAL | 85 | 392 | 36.2 | 16.39 | .94 | 4.00 | 15.13 | 0.26 |
| ARITHMETIC | | | | | | | | |
| 6 Computation | 60 | 392 | 19.7 | 9.21 | .88 | 3.21 | 9.93 | 0.19 |
| 7 Concepts | 30 | 382 | 11.5 | 5.66 | .82 | 2.38 | 20.00 | 0.41 |
| 8 Applications | 20 | 372 | 7.4 | 4.11 | .79 | 1.89 | 24.68 | 0.46 |
| TOTAL | 110 | 370 | 39.3 | 16.07 | .92 | 4.52 | 9.22 | 0.17 |
| TOTAL | 280 | 328 | 109.7 | 45.37 | .98 | 6.64 | 6.31 | 0.11 |

FIGURE 4

Correlation Coefficients between the TUF test, Form A and the National Achievement Test, Form A (Grades 3.2, 4.0, 6.5, 8, 10)

| TUF | Grade and Number of Students | | | | NAT |
|---|---|---|---|---|---|
| | 3.2 n=418 | 4.0 n=676 | 6.5 n=622 | 8 n=399 | |
| | r | r | r | r | |
| Arithmetic Computation | .76 | .77 | .86 | .84 | Arithmetic Fundamentals |
| Language Mechanics | .74 | .77 | .87 | .78 | Mechanics of English |
| Reading Vocabulary | .82 | .85 | .92 | .87 | Reading Vocabulary |
| Arithmetic Concepts | .68 | .71 | .77 | .65 | Arithmetic Reasoning |
| Language Spelling | .68 | .76 | .83 | .83 | Spelling |
| Reading Comprehension | .78 | .83 | .89 | .83 | Reading Comprehension |
| Arithmetic Total | .72 | .76 | .88 | .89 | Total Arithmetic |
| Language Total | .74 | .73 | .79 | .85 | Total Language |
| Reading Total | .80 | .84 | .92 | .93 | Total Reading |
| Battery Total | .89 | .90 | .96 | .94 | Total Battery |

PART III

OBJECTIVES

Vocabulary

1. The student will identify the category of a specific word.
2. The student will hear a word and select the wrritten definition.
3. The student will match words and phrases with opposite meanings.
4. The student will eliminate words from a list of synonyms that don't belong.

Comprehension

5. The student will discriminate between real and imaginary characters.
6. The student will identify the main idea of a passage.
7. The student will identify meaning in context.
8. The student will identify details that support assertions related to the reading passage.

Language Arts

9. The student will recognize incorrect capitalization, punctuation and spelling.
10. The student will identify complete, incomplete, and run-on sentences.
11. The student will recognize verbosity and repetition in sentences.
12. The student will select the correct sentence sequence for a paragraph.

Mathematics

13. The student will demonstrate an understanding of number theory and set theory: odd, even, prime, factors, equivalent fractions, cardinality of a set, equations, inequalities.
14. The student will demonstrate an ability to manipulate numbers through their properties: commutative, associative, distributive, identity.
15. The student will demonstrate an understanding of measurement and graphs.
16. The student will solve story problems including whole numbers, fractions, decimals, percents, ratio probability, and missing data.

## ITEM CLASSIFICATION

The following table displays items numbers on the test that correspond to specific test objectives.

| Objective | Vocabulary | OCBT | Reading | OBJ | Language | OBJ | Mathematics |
|---|---|---|---|---|---|---|---|
| 1 | 1, 2 | 5 | 12 | 9 | 31-35 | 13 | 43-47 |
| 2 | 3-5 | 6 | 13-20 | 10 | 36-38 | 14 | 48-55 |
| 3 | 6- 10 | 7 | 21-25 | 11 | 39-40 | 15 | 56-60 |
| 4 | 11 | 8 | 26-30 | 12 | 41-42 | 16 | 61-65 |

## PART IV

## TYPES OF SCORES AND REPORTS

### Scores

Percentiles. Percentile scores tell how a student's raw score compares with the score distribution in the norm group. Percentiles are obtained by taking the raw score and looking up in a conversion table the rank that this raw score has as compared to the norm group. Thus, if the raw score is 12, and we see on the Conversion Table that 12=80th%, we know that the person who got 12 correct on the original standardization sample scored better than 79 percent of the students and worse than 19 percent of the students in the norm group. Percentiles compare our students' performance with the ranks of the norm sample.

Percentiles are not equal interval scales. You cannot add or subtract them, nor use them to make comparisons across groups or tests. Raw scores tend to be clustered together near the middle of the distribution, 40-60 percentile, and spread apart near the ends, 1-20 percentile, and 80-99 percentile. As a result, if you score near the middle, you may only have to get several more items right to raise your percentile score quite dramatically.

Grade equivalents. Grade equivalent scores represent the grade and month in school of students in the norm group obtaining particular raw scores. If, for example, a student gets a raw score of 20 that converts into a grade equivalent of 5.6, it means that a group of fifth graders in the sixth month of school averaged 20 items correct on the same test.

The distance between GE scores are equal for a particular test. However, the GE scores for different subtests of the CAT have different intervals. Thus, 8.2 on the Reading Vocabulary Test does not represent the same number/ percent of items correct as an 8.2 on the Language Mechanics Test. GE's do not mean a student has mastered skills representative of a particular grade level.

Normal curve equivalents: Normal curve equivalents are scores that have been linearly transformed from percentiles. The transformation is to make them into an equal interval scale so that the distance between two NCE's is the same. They have the same meanings as percentiles; NCE's provide a rank score for a student as compared to the national norm group.

Because of the transformation, NCE's can be added, subtracted, and compared. An NCE score of 67 on one test is actually 7 points higher than an NCE score of 60 of another. The primary purpose of using NCE's is to make comparisons across different standardized tests such as those used in the Anchor study. These comparisons assure equivalence of content as well.

Scale scores. Scale scores are linear conversions of raw scores. They range from 000-999. A student with a scale score of 420 has scored 20 points higher than one with a score of 400. Scale scores do not make comparisons to norm group performance like percentiles, GE's and NCE's. Scale scores are independent of test level, form, grade and test date. Because of these qualities, they are used to compare students in different grade levels or to chart the performance of a single group of students over time or across different subtests. This kind of comparison is not possible with raw scores because these scores have different meanings, depending on the number of items in a test or the score distribution of students taking the test.

Figure 5

Sample Printout: District Level TUF Test Score Report

District
Grade 9.6
Level/Form: 16C, 17C, 18C (Levels)

Reading Test
Vocabulary C (Form)

| | | |
|---|---|---|
| N COUNT | 1328 | |
| MEAN GE | 8.4 | Median Grade Equivalent |
| MEDIAN GE | 8.1 | Median Grade Equivalent |
| STD DEV GE | 2.7 | (Standard Deviation Grade Equivalent) |
| MEAN SS | 541.5 | (Mean Scale Score) |
| MEDIAN SS | 535.3 | (Median Scale Score) |
| STD DEV SS | 74.1 | (Standard Deviation Scale Score) |
| MEAN NCE | 42.9 | (Mean Normal Curve Equivalent) |
| MEDIAN NCE | 41.3 | (Median Normal Curve Equivalent) |
| STD DEV NCE | 18.5 | (Standard Deviation, NCE) |
| MEDIAN NP | 34.3 | (Median National Percentile rank) |
| 75%ILE (Q-3) | | |
| GE | 10.3 | DISTRICT-NORMS. |
| SS | 587.4 | Scores that are |
| NCE | 54.4 | equilvalent to the |
| NP | 53.4 | 75-50-25%ile rank |
| 50%ILE (Q-2) | | when only the students |
| GE | 8.1 | in the school district |
| SS | 535.3 | are used for ranking |
| NCE | 41.3 | purposes. |
| NP | 34.3 | |
| 25%ILE (Q-1) | | |
| GE | 6.4 | |
| SS | 490.7 | |
| NCE | 30.1 | |
| NP | 17.1 | |
| N/QUARTER | | |
| 76-99 | 159 | NATIONAL-NORMS: |
| 51-75 | 285 | Number of students falling |
| 26-50 | 373 | into national percentile |
| 1-25 | 511 | rank. |
| %/QUARTER | | |
| 76-99 | 12.0 | Percent of students |
| 51-75 | 21.5 | falling into national |
| 26-50 | 28.1 | percentile ranks |
| 1-25 | 38.5 | |

REPORTS

Frequency Distributions. You may request test scores reported in the following kinds of frequency distributions: grade equivalents, normal curve equivalents, scale scores, stanines, raw scores, or local percentiles. These score reports provide the following information: the range of scores, from highest to lowest is reported in the far left column. Next to that score we report the number of students who obtained that score on the test and the percentile rank of this student group. This information is repeated for each subtest/test you wish described.

Frequency Distribution Summary Report. This report provides the following information for each subtest/test requested: number of students in the group, range of scores from high to low, grade equivalent scores for the quartiles, as well as sums of squares, standard deviations, and means,

Quartile Distributions. Quartile distributions break the percentile range into four groups of twenty-five percentile points each. It lists both the number of students and the percentage of students scoring in each quartile. You may request either district or national percentile distributions.

Administrator's Summary. The Administrator's Summary contains the following information: The grade equivalent of the mean scale score or other derived scores for all subtests/tests requested, the difference between the obtained mean scores and anticipated mean scores. These are provided by grade level, school, and district.

Evaluator's Summary. This report lists the means, medians, and standard deviations for each subtest/test for raw scores, grade equivalents, and scale scores. IT REPORTS THE MEDIAN NATIONAL PERCENTILE AND THE GRADE EQUIVALENT BASED ON THE MEAN SCALE SCORE FOR EACH SUBTEST/TEST. You may also request

pre-/post-test data on the same report with differences between them listed. This report also includes the number of students and percentage of students falling in each quartile.

## Simulated Program Description

### The District

The _____ District has a bilingual program involving three elementary schools--Tally, Cedric, and Walpole, and the junior high school--Knoll. The elementary program is a transitional K-4 program. It has been in operation in Tally for one year, at Cedric for about four years, and at Walpole for about eight years.

There are approximately 330 elementary students in the bilingual program. Most of them (280) speak Swabe. The remaining students, 50, speak Ono. Students were selected on the basis of informal interviews by teachers, however, there is no documentation of this. Swabe is a widely spoken language and there are plenty of instructional assessment materials available, although much of it comes from a foreign country and needs adaptation. Materials in Ono are not as common, since this is a relatively small country. In fact, teachers have been making up their own materials for their students. The elementary bilingual program teaching staff consists of nine teachers. Five are bilingual Swabe/English and one is a bilingual Ono/English. Three teachers are in the process of learning Swabe to obtain certification as bilingual teachers. Each of the monolingual English speaking teachers is assisted by an aide. There are five aides in the program, four are bilingual Swabe/English and one is bilingual Ono/English.

There are approximately 123 junior high school students in the bilingual program. All of the students are speakers of Swabe. All students who are non-native English speakers are automatically placed in the regular

classroom. This determination must be made within a week of the student's enrollment at Knoll Junior High School.

There are three ESL teachers, and four bilingual teachers at Knoll.

Background Information

There is a parental advisory board which meets about every three months. However, most of their functions revolve around fund raising for sports and other extracurricular events for the elementary schools. To date they have had no substantive involvement with curricular issues. There is sparse representation of the bilingual program students' parents and there has been little effort put forth to recruit members from this part of the community because of the language barrier and because most of the parents feel they do not have the time to do this. Minutes have been kept of all the meetings and there is ample documentation of their activities.

Some inservice training is provided to school staff. Teachers and aides are given about eight days of release time a year to attend workshops. To date teachers have attended workshops on teaching of reading to limited English proficient students, and teaching social studies and science to Swabe NES and LES students. Aides have received one 3-day workshop on teaching reading and vocabulary in the native language. All workshop sessions are taped, and feedback questionnaires from the participants are kept on file. The quality and participant satisfaction with the workshops varies according to the workshop leader's proficiency and style.

The Elementary Bilingual Program Goals and Objectives

The goals and objectives of the bilingual program are:

1. To help the student attain sufficient competency in the English language to ensure his/her proficiency in all areas of academic concern.
2. To develop students' cognitive and academic skills in reading and math in English and the native language.
3. To develop student self-concept and cultural pride.
4. To create and maintain a project staff of teachers, paraprofessional aides, and administrators with a high degree of expertise in their respective fields.
5. To create and maintain inservice and other instructional programs for the staff in order to enrich their professional development.
6. To promote an active and positive relationship between the schools and the community.
7. To promote a mutual support and integration of the bilingual and monolingual English programs in the schools.

The Elementary Schools

Tally Elementary has 90 students in the bilingual program, 40 who speak Ono and 50 who speak Swabe. Twenty students are in the combination grades 1 & 2 and 32 are in combination grades 2 & 3. This is the newest component of the bilingual program and it is beginning its first year.

The teacher in charge of the Ono students, Mr. L, is a former ESL teacher who has obtained certification in order to protect his job. In his view, his job was threatened by the need for bilingual teachers at the school and the shortage of funds to hire more teachers. He really doesn't feel there is a need for establishing a bilingual program for so few Ono speaking students. He apparently is not aware of the growing influx of the Ono speaking population in the area due to unrest in their native country. Because of his limited proficiency in the Ono language, Mr. L conducts all of his instruction in English and has given the Ono speaking aide, Ms. R, responsibility for conducting instruciton in Ono. He teaches reading and math every other morning and Ms. R teaches the same subjects and other content areas in the afternoons. Mr. L is confident in Ms. R's teaching skills since she had been an elementary school teacher for ten years in her native country. He also feels fortunate that Ms. R had adapted and created some reading materials in Ono for the children.

The Swabe students are in two classrooms. Ms. I, who is in charge of the combination grades 1 & 2, is a credentialed bilingual teacher who team teaches with Ms. T, who is a monolingual English speaking teacher.

Ms. I is the Swabe model and Ms. T the English model. Their class is grouped into four reading and four math groups. Other content areas are taught to the whole class, back to back. The combination grades 2 & 3 are structured similarly to the class described above. Ms. J, and ESL teacher who is in the process of obtaining certification as a bilingual (Swabe/ English), works with a bilingual aide.

The principal of the school, Mr. Jones, has mixed feelings about bilingual education. He doesn't see any differences between ESL and bilingual education. However, he is willing to do anything within reason to provide a good education to the limited English speaking students and, most of all, to get their achievement scores up. He hopes that this year's evaluation will show some improvement in this area.

Cedric Elementary. This school has 120 students in the bilingual program: 70 in grades 1 & 2; 50 in grades 2 & 3; and 23 in grades 3 & 4. The teachers for grades 1 & 2 and 2 & 3, Mrs. H and Mr. W respectively, are certified bilingual teachers. Each is assisted by a bilingual Swabe/ English speaking aide.

Mrs. H has only been teaching for two years and strongly favors the bilingual program. However, she feels that more certified bilingual personnel are needed as well as more follow up of the students who have been exited from the program. Mr. W, who has been teaching for six years, is disillusioned with bilingual education and teaching in general. He feels that the process is long and arduous and that teachers as well as administrators must constantly battle red tape and paperwork which interfere with classroom teaching. He is especially critical of over testing and the use of irrelevant and possibly damaging tests.

Both Mrs. H and Mr. W have structured their classrooms around reading and math groups. However, the number of groups per grade per subject in each classroom has become difficult to handle. They are seeking other ways of structuring their classrooms but the wide range of their students' language and math skills both in English and their native language make this a difficult task.

The teacher for the 3/4 combination, Ms. M is a monolingual English speaker who is seeking certification by taking the appropriate course work. She is also assisted by an aide and team teaches with a monolingual English speaking teacher, Ms. S. Ms. M is very much in favor of the bilingual program because she has been teaching at Cedric for many years and has seen the difficulties which the school had to encounter when it tried to provide a good education to large numbers of Nes/Les students by relying on a rather weak ESL program. In Ms. M's opinion, the bilingual program director, and the school principal, Mrs. Hoover, had integrated former ESL personnel such as herself and other ESL teachers and aides. She also feels they have recognized the potential value of an ESL component within the bilingual program.

Ms. M has divided her class into three English reading levels and works with each group separately in English language skills. All other areas are taught to the class as a whole. She relies heavily upon her aide for providing instruction in the native language to the students. Ms. M gives her aide very careful and detailed lesson plans on math and reading in the native language. However, Ms. M feels that her aide needs more education and she is not quite sure about the aide's effectiveness.

The school principal, Mrs. Hoover, is aware of Mr. W's frame of mind and has suggested that he take a "leave from classroom teaching and become

a resource teacher for the bilingual unit. She feels he could make a contribution in improving the assessment problems and other areas of the program.

Mrs. Hoover feels that the program, which is in its 4th year, is successful although the achievement scores would not indicate this. However, she feels that the general attitude of the students in the program has improved. Furthermore, students who have transitioned into the regular English program are faring better than their pre-bilingual program predecessors. One of her goals for this year is to devise a plan for a formal follow up of those transitioned students up until they reach junior high.

Walpole elementary has 120 students in the bilingual program: 32 in grade 1; 27 in grade 2; 28 in grade 3; and 33 in grade 4. The teachers in grades 1 and 2, Mr. I and Mr. S, are bilingual teachers. Ms. Z, the grade 3 teacher is an ESL teacher who is studying for certification as a bilingual teacher. Ms. J, who teaches the fourth grade class is not a certified bilingual teacher and plans to retire from the teaching field at the end of the year. She is assisted by a bilingual aide.

The Walpole program is in its eighth year. All classrooms are self contained and the bilingual teachers use whatever methods they feel work best in instruction. Students are transitioned after being in the program for two years or if they pass the English language proficiency test developed by the teachers and achieve at the stanine on the TUF achievement test.

Mr. Smith, the principal, does not favor the bilingual program. He feels that the majority of the students do not achieve at the same level as the students in the regular monolingual English program. Furthermore,

he has followed up a few of the students through their first year in junior high and he concludes that the bilingual program is ineffective. However, there has been no systematic or documented follow up of students exiting the bilingual program. Mr. Smith would rather see limited English students attend an ESL course until they are ready to join the regular program.

Evaluation Criteria for the Elementary Program

Exit criteria: This has been a source of confusion and contention among the bilingual program director, the principals and members of the school board. The board and some of the principals feel that students who achieve at the stanine in math and reading in English, should be transferred out of the bilingual program. They also feel that if a student has been in the bilingual program for two years, he/she should be ready to join the regular monolingual English program. The bilingual program director and some of the principals feel that these criteria are not adequate for several reasons. First of all, they feel that the standardized achievement test used to measure reading and math in English is biased against the bilingual program students, due to cultural bias in the items and their lack of relevance to the curriculum. Although they would agree to including student achievement scores in reading and math in English on a more appropriate standardized test, they feel that this would not be enough. In addition, they would like to administer an "exit" language proficiency test which would examine writing and listening comprehension in English as well as reading and speaking skills. They would also prefer to use a district developed criterion referenced test relevant to their curriculum in: language skills in English, and math, social studies and science in English or the native language. The purpose of this would be to see whether exiting students are entering the monolingual English program with the same kinds of skills and knowledge as their peers. Neither the bilingual program staff nor the monolingual English program staff has examined the similarities or differences between the curricula of the two programs. Although they both contain similar

(and in some cases the same) objectives, the instructional materials are different as are the teaching strategies. The present situation within the bilingual program is that each school has its own transfer criteria. In the older programs, such as those in Cedric and Walpole Elementary schools, students must exit the program after 2 1/2 years. Tally Elementary school has placed no time limit and relies on achievement scores and informal teacher assessment to determine transfer eligibility. No formal follow up procedures have been set up for the bilingual program students who have transferred.

Outcomes: Of the two schools, Cedric/Walpole Elementary schools have tested their students on a yearly basis with a standardized achievement test on reading and math in English. This has been done for students in grades 2, 3 and 4. Most of the bilingual program students have scored lower than the students in the monolingual English program. The gap widens as the children get older. The bilingual program director blames the inadequacy of the test and the newness of the programs for these results. Board members and principals have various opinions about how to go about improving student achievement. Some board members and principals feel that greater emphasis should be placed on English language skills in the curriculum and teaching strategies. Others feel that students need more strengthening of basic skills in their own language and in English before they can do well in the monolingual English program. Neither the board nor the majority of the principals have discussed this issue with the parental advisory board. The bilingual program director and the principal of Walpole Elementary feel that more parental involvement in the schools could indirectly and positively affect student achievement by improving

students' self-image and study habits at home. Some of the teachers and the bilingual program director feel that it is unfair to compare the performance of bilingual program and monolingual English program students.

The Junior High School

Knoll Junior High has had an ESL component for seven years. Ms. K, the bilingual program director, has been trying to implement a transitional bilingual program here for the past two years. Her rationale is that the Swabe population has been steadily increasing with a sharp rise in recent immigration. Swabe students have increased from 89 last year to 123 this year. Most of the new Swabe students were non-English speakers. Furthermore, the incidence of high-school dropouts has always been high for these students. Ms. K and Ms. Neuman, who has been principal at this school for three years, feel that the bilingual program may enhance student self-concept and provide additional instruction which could be beneficial to the Swabe students and have a positive effect on the dropout rate.

The teaching staff has had mixed reactions to the change. Overall, the teachers at Knoll feel that the school has a responsibility to try to provide a good education to all of its students. However, there is some skepticism about bilingual education. Others fear a separation between the staff in the bilingual program and the regular English program staff. The three ESL teachers (who had been at Knoll from 3-5 years) feared for their jobs at first. However, these fears have not materialized.

One teacher, Ms. D, is studying toward the bilingual certification. In the meantime, she provides instruction for the most advanced LES students with the help of a bilingual aide. Mr. N is team teaching with a new bilingual teacher, Ms. Q. They teach the non-English proficient and very limited English proficient students. Ms. J, another ESL teacher, has decided to teach social studies, paying particular attention to LEP students in her class. Four bilingual teachers have been hired since the

program began. Two teachers instruct beginning and intermediate LEP students and two instruct intermediate and advanced bilingual program students. The principal and bilingual program director felt that it would be more efficient to group students according to their language proficiency since this criterion determines what language they will receive instruction in in other content areas such as science and social studies. The beginning and intermediate students receive instruction in math and other content areas back to back in both languages. However, the advanced bilingual students take some courses in the regular English program before they actually transition. Their performance in these courses is one of the transition criteria for these students.

Evaluation Criteria for the Junior High Program

Exit criteria: Students will be exited from the bilingual program upon fulfillment of the following criteria:

1. At least one year in the program.
2. Scores in the 3rd stanine on English language skills and math on the TUF standardized achievement test.
3. Satisfactory performance (or better) in a regular English program course.

The same controversies exist over these transitional criteria as for those of the elementary school program. The program director and principal are considering the deletion of #3 above because of possible traumatic effects on a student who "cannot make it" in regular classes. However, some of the board members feel that this is a good way to find out whether a student is ready to transition.

Simulation Test Selection

Checklist

Part I:

Summative evaluation question: _____

_____

Formative evaluation question: 1)_____

_____

2) _____

_____

Part II: Ideal Information Gathering Strategy

| Question | NRT | CRT | Survey | Diagnostic | Lang. Prof. | Lang. Dom. | Other |
|---|---|---|---|---|---|---|---|
| S1 | | | | | | | |
| F1 | | | | | | | |
| F2 | | | | | | | |

Part III: Feasible Information Gathering Strategy

| Question | NRT | CRT | Survey | Diagnostic | Lang. Prof. | Lang. Dom. | Other |
|---|---|---|---|---|---|---|---|
| S1 | | | | | | | |
| F1 | | | | | | | |
| F2 | | | | | | | |

Before completing this chart, remember to take into account the following:

1) Are the tests available?
2) How many students must be tested?
3) How many language groups must be tested?
4) How much time can be taken up with testing?
5) How soon must you get your test results?